







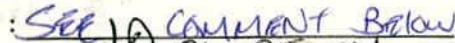
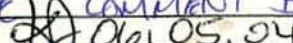



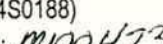




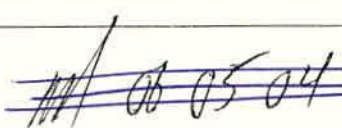
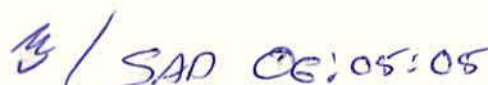








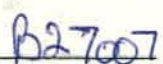
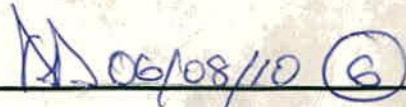


Thursday, 5/4/2006 10:45:15 AM

User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : WEARPLATE	  Qty:  Um: Each
Job Number : 27006 	Part Number : D3511041	
Estimate Number : 12403	Drawing Number : D3511 REV A	
P.O. Number : 	Project Number : N/A	
This Issue : 5/4/2006 S.O. No. : 	Drawing Revision : A	
Prsht Rev. : NC	Material : 	
First Issue : 	Due Date : 5/5/2006	
Previous Run :		
Written By : 		
Checked & Approved By : 		
Comment : Est Rev: A New Issue 06-05-04 JLM		
Additional Product		
Job Number: 		
Seq. #:	Machine Or Operation:	Description :
1.0	M304S188	304 SHEET .188" THICK
		
Comment: Qty.: 1.5572 sf(s)/Unit Total : 12.4572 sf(s) 304 SHEET .188" THICK (M304S0188) Batch: 		
2.0	WATER JET	FLOW WATER JET
		
Comment: FLOW WATER JET 1-Cut as per Dwg D3511 Dwg Rev:  Prog Rev:  2-Deburr if necessary		
 		
3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
		
Comment: INSPECT PARTS AS THEY COME OFF MACHINE 		
4.0	QC8	SECOND CHECK
		
Comment: SECOND CHECK 		
5.0	D35031	CUP
		
Comment: Qty.: 8.0000 Each(s)/Unit Total : 64.0000 Each(s) CUP Batch: 		
		





W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr CHIEF ENG	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
06.05.10	4	3 HOLES CUT IN WEARPLATE TAB TOO LARGE FROM WATERJET CUTTING 3 wearplates 1 piece each. ALSO A line cut APPROX .060 into the side of the wpt'l from the waterjet.	At 06.05.10 per USS 072	FILL GAP WITH WELD  see-attached e-mail  Fill this cut with weld and grind flush. See photo & e-mail.	At 06.05.10 per USS 072 06/05/10	06.05.10	see e-mail	06.05.10

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: ☒ Date: 06/05/10

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 27006

Part Number: D3511041

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld as per Dwg D3511

A/R SS ROD Batch: M10037206/05/10 (6)

7.0

QC5/9

WELD INSPECTION



Comment: WELD INSPECTION

PD 06-03-10 (6)

8.0

SMALL FAB 1

SMALL &amp; MEDIUM FAB RESOURCE 1



Comment: SMALL &amp; MEDIUM FAB RESOURCE 1

Form as per Dwg D3511

SP 06/05/05 (6)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

06-05-08 (6)

10.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Black Sandtex (Ref: 4.3.5.7) as per QSI 005 4.3

PC 06/05/18 (6)

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FC 06 05 18 (6)

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

Stack 2 x D3511-1 only

13.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

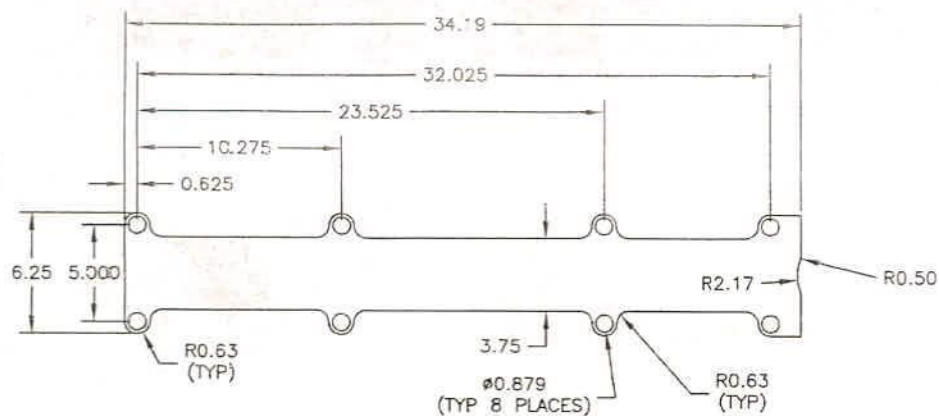
Inspection Level 21

06/05/25 (6)

Job Completion

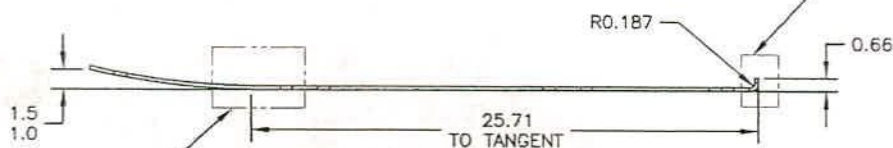
06/05/18





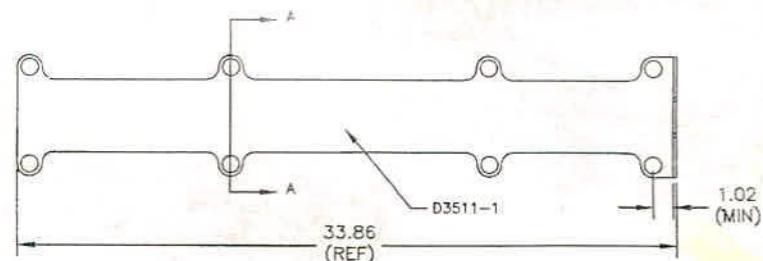
**D3511-1F FLAT PATTERN**

NOTE: BEND BEFORE WELDING



**D3511-1 BEND DETAIL**

NOTE: BEND AFTER WELDING



**SECTION A-A**

**D3511-041 WELD DETAIL**

**D3511-041 WEARPLATE ASSEMBLY**

- 1) MAKE D3511-1F WEARPLATE FROM: AISI 304/316 STAINLESS STEEL (0.188 THICK)  
(REF DART MATERIAL SPEC. M304S7GA)
- 2) WELD PER DART QSI 004
- 3) FINISH: POWDER COAT ASSEMBLY BLACK SANDEX (REF. 4.3.5.7) PER DART QSI 005 4.3
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3511-041 WEARPLATE ASSEMBLY PARTS LIST**

QTY -041	PART NUMBER	DESCRIPTION
X	D3511-041	WEARPLATE ASSEMBLY
1	D3511-1	WEARPLATE
8	D3503-1	CUP

RELEASED

06 04 25

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A	06.04.04	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	J. J. H.	APPROVED
DATE	06.04.04	DRAWING NO. D3511
		TITLE WEARPLATE
		REV. A SHEET 1 OF 1 SCALE NTS

**DART**

DART AEROSPACE LTD.  
WARRICK, ONTARIO, CANADA


NO. 27006  
WORK ORDER  
WITHOUT NOTICE  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
ENGINEERING  
RETURN TO  
SHOP COPY

DART AEROSPACE LTD		Work Order:	
Description:		Part Number:	
Inspection Dwg:	Rev:		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype

[illegible]

Measured by: 	Audited by:	Prototype Approval:
Date: 06-05-05	Date:	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	





## Peter Hum

---

**From:** David Shepherd [davids@dartaero.com]  
**Sent:** Wednesday, May 10, 2006 1:27 PM  
**To:** Peter Hum  
**Cc:** Eric Charbonneau (E-mail)  
**Subject:** Re: bearpaw wearplate tab gap

Acceptable deviation.

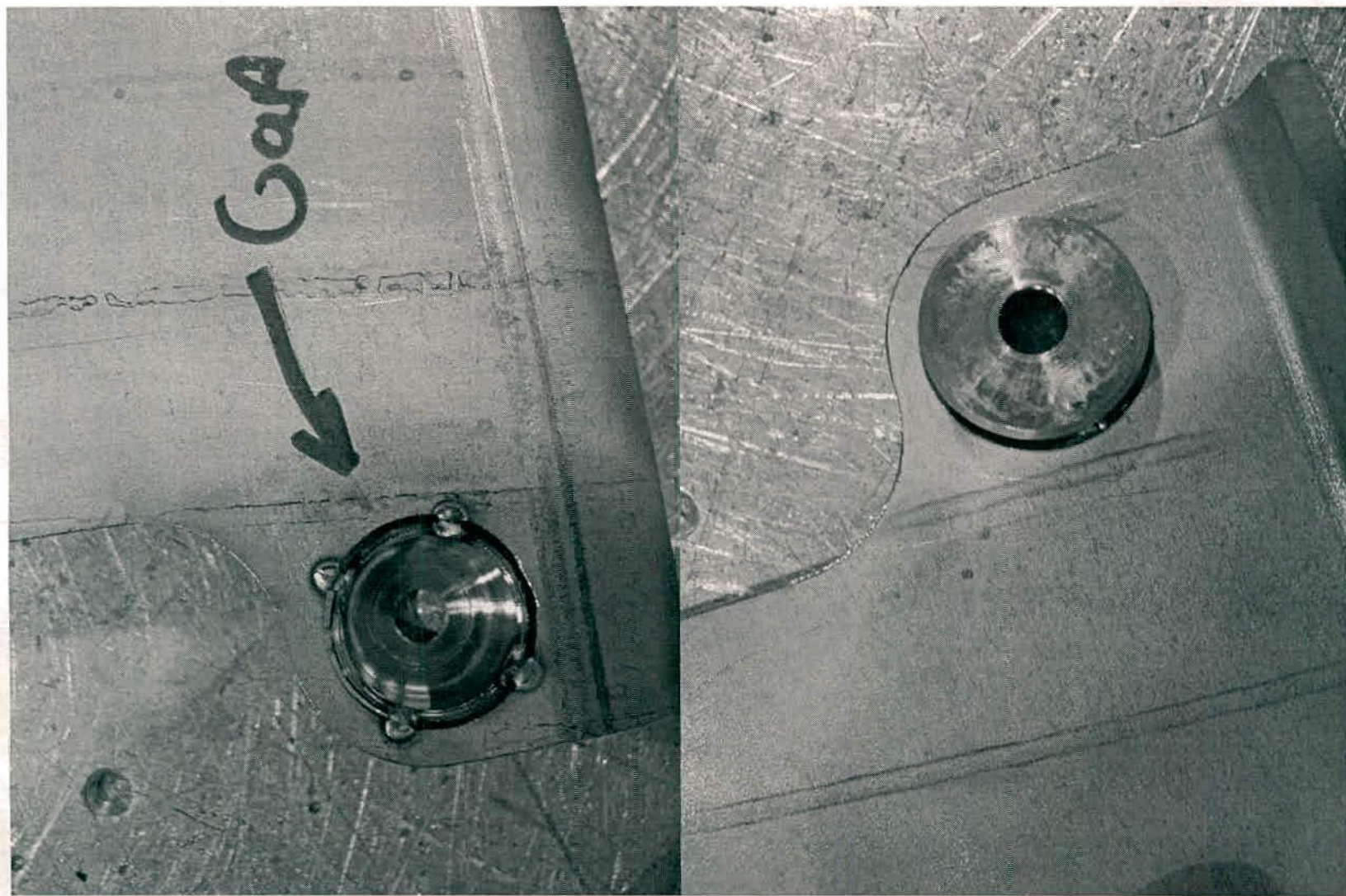
David

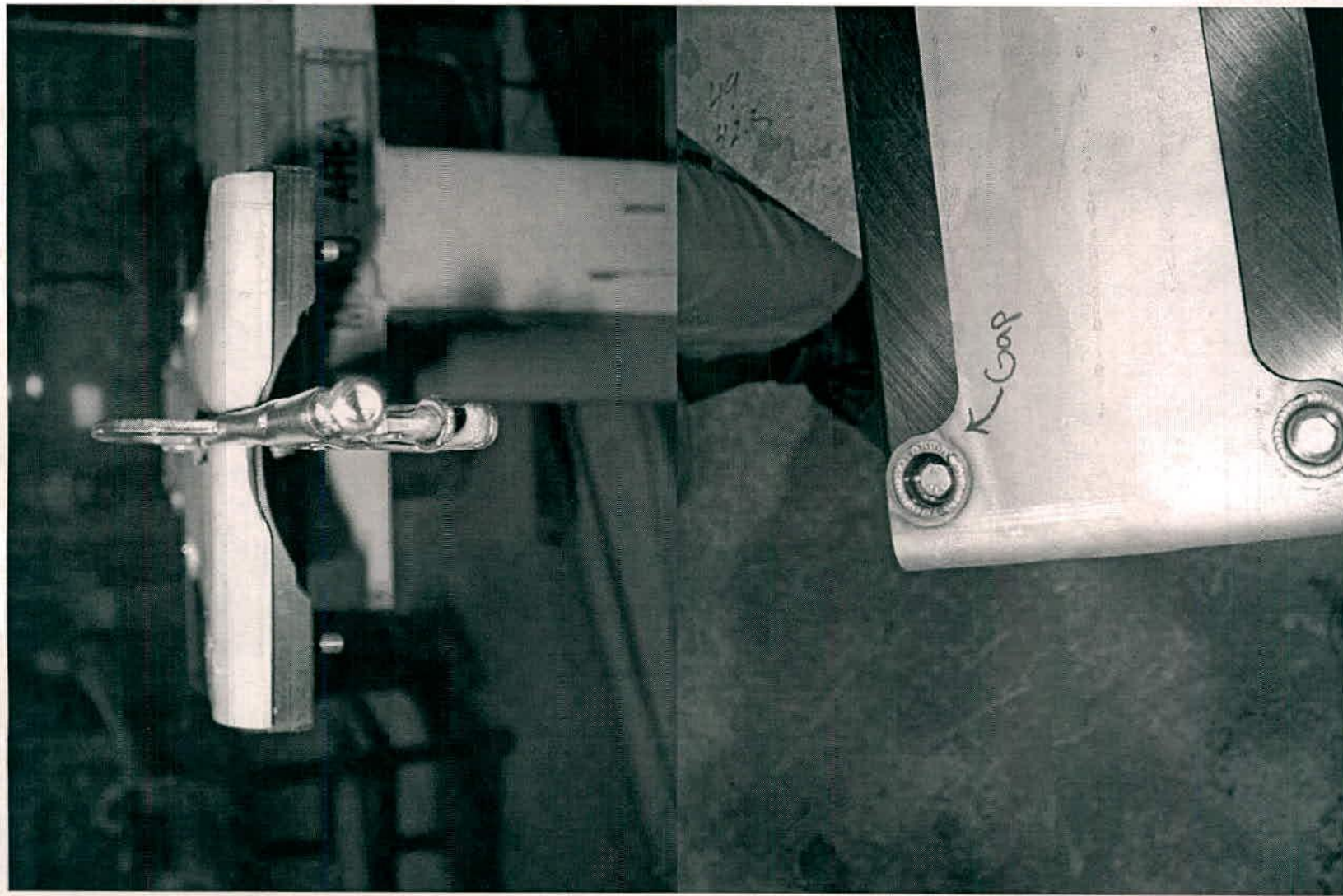
----- Original Message -----

**From:** "Peter Hum" <phum@dartaero.com>  
**To:** "David Shepherd (E-mail)" <davids@dartaero.com>  
**Cc:** "Eric Charbonneau (E-mail)" <echarbonneau@dartaero.com>  
**Sent:** Wednesday, May 10, 2006 8:22 AM  
**Subject:** bearpaw wearplate tab gap

> Hi David,  
>  
> On 3 pieces of the new bearpaw wearplate (D3511); 1 tab in identical  
> locations in the 3 pieces were made too big by the watejet cutter (approx  
> 0.925) 0.879 is nominal  
>  
> We tried to fill the gap between cup and the hole with weld and then weld  
as  
> normal.  
>  
> The pictures I have attached show the gap filled with weld and installed  
> properly without any alignment problems onto the bearpaw.  
>  
> Is it acceptable to fill the gap between the cup and the wearplate hole  
with  
> weld?  
>  
> Peter Hum  
> Mechanical Designer  
>  
> DART Aerospace Ltd.  
> Email...phum@dartaero.com  
> Phone...613-632-3336  
> Fax.....613-632-4443  
>  
>









**Peter Hum**

---

**From:** David Shepherd [davids@dartaero.com]  
**Sent:** Friday, May 05, 2006 10:48 AM  
**To:** Peter Hum  
**Subject:** Re: D3511 bearpaw wearplate chip

I agree. Fill chip with weld when cup is being welded on. This is a non-structural part anyways.

David

----- Original Message -----

**From:** "Peter Hum" <phum@dartaero.com>  
**To:** "David Shepherd (E-mail)" <davids@dartaero.com>  
**Sent:** Friday, May 05, 2006 7:26 AM  
**Subject:** D3511 bearpaw wearplate chip

> Hi David,  
>  
> The D3511 stainless steel wearplate has a chip near the tab area as shown  
> in  
> the attached picture. The Cup will be welded into the large hole in this  
> tab, therefore there will be weld near this chip anyways  
>  
> Is it acceptable to filled this chip with weld?  
>  
> Peter Hum  
> Mechanical Designer  
>  
> DART Aerospace Ltd.  
> Email...phum@dartaero.com  
> Phone...613-632-3336  
> Fax.....613-632-4443  
>  
>





